

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P308631

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CP187-W2A-U-4500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P308631
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L82765-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1849.0 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

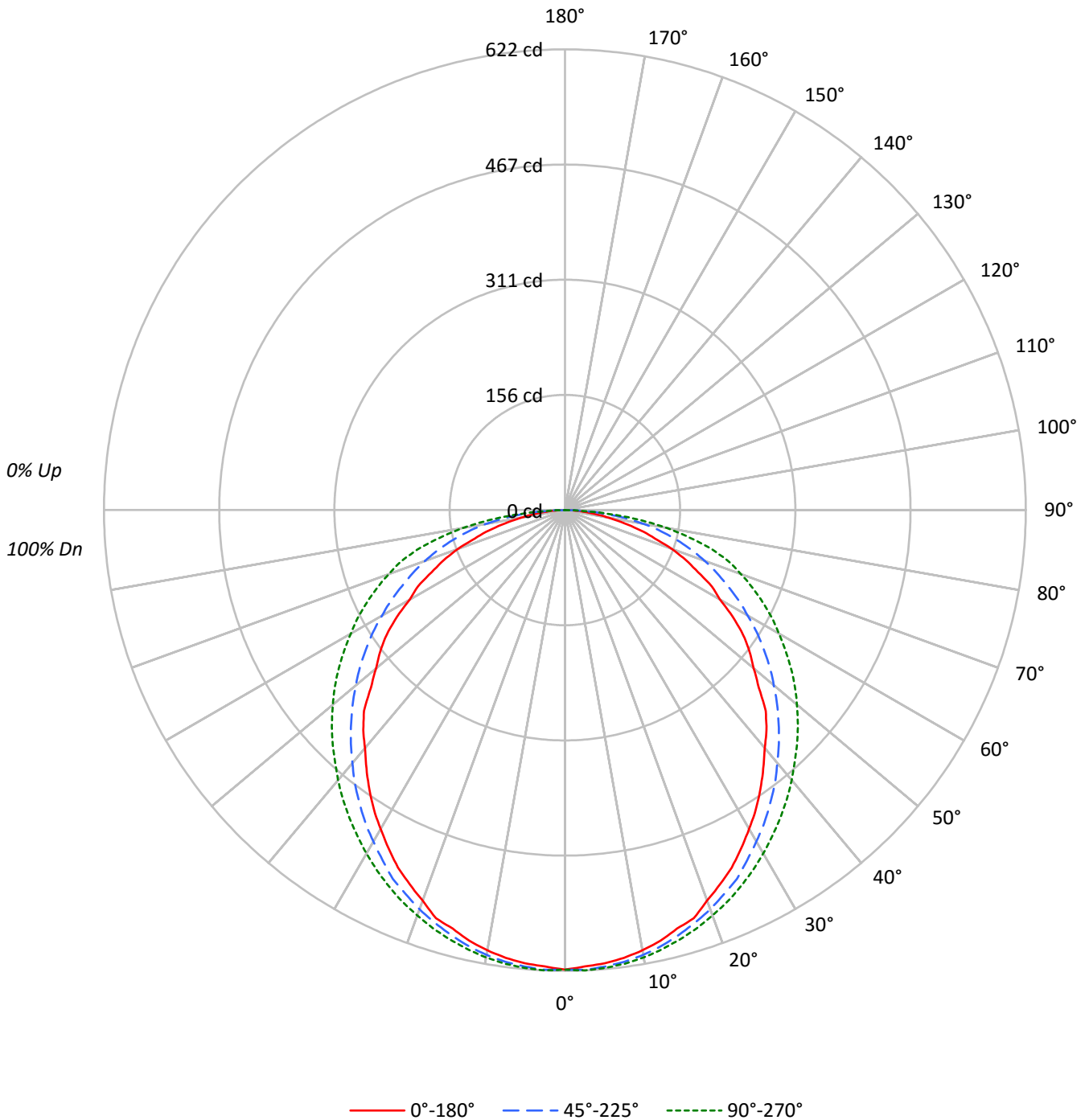
Input Watts (W): 17
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1669	1669	1669
5°	1659	1671	1676
10°	1649	1666	1676
15°	1630	1654	1672
20°	1607	1642	1668
25°	1582	1632	1666
30°	1545	1606	1664
35°	1512	1587	1666
40°	1474	1567	1672
45°	1458	1553	1687
50°	1393	1541	1712
55°	1378	1536	1748
60°	1300	1534	1795
65°	1262	1544	1876
70°	1212	1581	1991
75°	1104	1628	2144
80°	947	1686	2166
85°	766	1612	1859



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	3.2
10°-20°	167.5	9.1
20°-30°	252.0	13.6
30°-40°	302.5	16.4
40°-50°	316.2	17.1
50°-60°	294.6	15.9
60°-70°	241.7	13.1
70°-80°	162.8	8.8
80°-90°	53.0	2.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	478.2	25.9
0°-40°	780.7	42.2
0°-60°	1391.5	75.3
0°-90°	1849.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1849.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	614	616	619	620	620	58
15°	585	588	594	599	600	165
25°	533	536	550	558	561	245
35°	460	466	483	500	507	288
45°	383	386	408	433	443	293
55°	294	299	327	358	373	260
65°	198	207	242	278	295	197
75°	106	118	157	192	206	112
85°	25	35	52	61	60	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	620.4	620.4	620.4	620.4	620.4
2.5°	616.8	618.6	621.2	622.1	622.1
5°	614.2	615.9	618.6	619.5	620.4
7.5°	609.7	611.5	615.0	616.8	617.7
10°	603.5	605.3	609.7	612.4	613.3
12.5°	595.6	597.3	602.7	606.2	607.1
15°	585.0	588.5	593.8	599.1	600.0
17.5°	577.9	577.0	584.1	590.3	592.0
20°	561.1	565.5	573.5	580.5	582.3
22.5°	546.9	550.4	561.1	569.0	572.6
25°	532.7	536.3	549.6	557.5	561.1
27.5°	515.0	520.4	532.7	544.2	548.7
30°	497.3	502.7	516.8	530.1	535.4
32.5°	479.6	485.8	500.9	515.0	521.2
35°	460.2	466.4	483.2	500.0	507.1
37.5°	439.8	447.8	465.5	484.1	492.0
40°	419.5	427.4	446.0	467.3	476.1
42.5°	402.7	406.2	427.4	450.4	459.3
45°	383.2	385.8	408.0	432.7	443.4
47.5°	354.9	364.6	388.5	415.9	426.5
50°	332.7	343.4	368.1	397.3	408.9
52.5°	314.2	321.2	348.7	377.9	391.2
55°	293.8	299.1	327.4	358.4	372.6
57.5°	269.0	278.8	307.1	338.9	353.1
60°	241.6	254.0	285.0	319.5	333.6
62.5°	223.9	231.0	264.6	299.1	315.0
65°	198.2	207.1	242.5	277.9	294.7
67.5°	177.0	185.8	222.1	257.5	274.3
70°	154.0	162.8	200.9	236.3	253.1
72.5°	127.4	139.8	179.6	215.0	232.7
75°	106.2	117.7	156.6	192.0	206.2
77.5°	82.3	97.3	133.6	162.8	173.5
80°	61.1	76.1	108.8	130.1	139.8
82.5°	41.6	56.6	81.4	97.3	102.7
85°	24.8	35.4	52.2	61.1	60.2
87.5°	11.5	15.0	21.2	21.2	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)